NAVAL POSTGRADUATE SCHOOL

MONTEREY, CALIFORNIA

DIMENSIONS OF SMALL UNIT RESILIENCE IN ORGANIZATIONS FACING THREATS, DISRUPTION, AND STRESS

by

Edward H. Powley
John F. Lopes

June 2011

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NAVAL POSTGRADUATE SCHOOL
Monterey, California 93943-5000

Daniel T. Oliver
President

Leonard A. Ferrari
Executive Vice President and
Provost

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This report was prepared by:

Edward H. Powley
Assistant Professor

John F. Lopes
United States Army

Reviewed by:

Released by:

Bill Gates
Dean and Chair Graduate School of
Business and Public Policy

Karl van Bibber
Vice President and
Dean of Research

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14. ABSTRACT
When service men and women deploy into a theater of operation, they encounter a sustained series of stressors unlike any they would encounter elsewhere. To mitigate the cumulative effect of these stressors on their units and individuals, leaders and unit members must be able to assist one another to effectively cope under stressful conditions. We believe that resilience and coping strategies improve the effectiveness and sustainability for those in service. The central purpose of this project is to examine the factors of small unit organizational resilience. Assessments such as these intend to inform how leaders might build, foster, and sustain resiliency in their organizations. Resilience is defined as "the capacity for adaptability, positive functioning, or competence following chronic stress or prolonged trauma" (Sutcliffe & Vogus, 2003, p. 96). Put simply, it allows an individual or organization to draw on internal and external resources to positively adjust to current adversities and strengthens their ability to cope with future setbacks. We offer four core domains of resilience that units may use to assess their ability to deal with operational stress: *concerted leadership, adequate resources, enhancement of organizational learning, and flexibility and adaptability in the face of adversity.*

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ABSTRACT

When service men and women deploy into a theater of operation, they encounter a sustained series of stressors unlike any they would encounter elsewhere. To mitigate the cumulative effect of these stressors on their units and individuals, leaders and unit members must be able to assist one another to effectively cope under stressful conditions. We believe that resilience and coping strategies improve the effectiveness and sustainability for those in service. The central purpose of this project is to examine the factors for measuring small unit organizational resilience. Assessments such as these intend to inform how leaders might build, foster, and sustain resiliency in their organizations. Resilience is defined as "the capacity for adaptability, positive functioning, or competence following chronic stress or prolonged trauma" (Sutcliffe & Vogus, 2003, p. 96). Put simply, it allows an individual or organization to draw on internal and external resources to positively adjust to current adversities and strengthens their ability to cope with future setbacks. We offer four core domains of resilience that units may use to assess their ability to deal with operational stress: *concerted leadership, adequate resources, enhancement of organizational learning, and flexibility and adaptability in the face of adversity.*

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This technical report on organizational resilience in small units was inspired in large part by John F. Lopes, who did much of the background work on stress, suicide, and resilience. His contribution to the work on organizational and unit resilience is significant because of his first-hand knowledge of the challenges service men and women in the United States Armed Services face daily in the field. The report is based primarily on his MBA project (Lopes, 2010) at the Naval Postgraduate School, completed December 2010.

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INTRODUCTION

Individual Soldiers and military units vary in their ability to handle and cope with stress. For example, the rate of Active Duty Soldiers committing suicide or developing post-traumatic stress disorder (PTSD) has increased dramatically since the onset of the wars in Iraq and Afghanistan. According to Hannah Fischer of the Congressional Research Service (2009), the Military Health System (MHS) has "recorded 39,365 service members who have been diagnosed with post-traumatic stress disorder (PTSD)" from 2003 to 2007 (p. 2). Suicides are also up. According to the Defense Manpower Data Center (2010a,b), as of September 2010, 260 service members serving in Iraq and Afghanistan have died of "self-inflicted wounds" (p. 1). Of these deaths, 82.3%, or 214, of these suicides were *in the combat zone*. These figures represent significant increases over a four-year period: PTSD diagnosis was 14.1% in 2009, up from 4.6% in 2005 (Department of the Army, 2010, p. 26), and suicide rates exceeded the age-adjusted rate in the civilian population (20.2 per 100,000 vs. 19.2) (Department of the Army, 2010, p. 14). Moreover, the total number of suicide deaths across all four branches of service each year has far outpaced the total number of casualties in the Afghan war. Clearly, war-related stress has taken its toll in the military.

Resilience, defined here as "the maintenance of a positive adjustment under challenging conditions" (Sutcliffe & Vogus, 2003, p. 95), offers a framework for ameliorating effects of trauma and stress, not just in individuals, but for military units. Little research has been done to layout a resilience framework at the unit level, that is organizational departments (i.e, teams, groups, functional areas). According to the Department of the Army (2009), "prior to the war in Iraq, there were no empirically validated strategies to build resilience or methods to prevent combat related Behavioral Health (BH) problems" in deployed Soldiers or in those returning

from combat deployments (p. 3-8). There has been a wide scholarly and practitioner literature on individual resilience, primarily in the field of psychology. The most important contribution to the field of resilience and military stress has been the Soldier Fitness program.

The following example depicts the importance to individual service men and women for unit level resilience:

> After a couple of months in Iraq, Williams was ordered to take home leave. According to Scott (William's mother), that's when the problems started. His unit had just lost men, and as he waited for the flight home, his fiancée called to say she was in love with someone else. It took five days for Williams to make it home to Minnesota. Without his fiancée, he arrived that Christmas at his mother's new house with her new husband.

> 'I knew he was in terrible pain,' Scott says. 'I knew he was at risk for suicide, but I absolutely did not know what to do. I didn't know whether to talk to him or not talk to him. I didn't know what to say. I didn't know whether to ask him or pretend everything was normal.'

> Scott says Williams shared some of what he saw in Iraq with his brother and sister, but he did not tell her anything. Toward the end of his two-week leave, he met up with his former fiancée so they could return each other's belongings. The day before he was to fly back to Iraq, he seemed calm and upbeat.

> 'He was looking forward to getting back to Iraq,' Scott recalls. 'He missed his buddies. He wanted to learn to play the guitar when he got over there ... He had this sense of lightness and peacefulness, and I thought, 'Oh, thank God, he's OK. I can go to bed tonight and sleep.' And I woke up the next morning to him having taken his life.'

Williams had been in the Army for less than three years. His mother believes that if he had stayed in Iraq, her son would have survived, as his battle buddies would have been able to help him deal with the deaths in his unit and the loss of his fiancée (Tarabay, 2010).

This example highlights the role of the military organizational unit and its potential to buffer the effects of trauma and stress. The unit can be a great source of strength as those in the group develop bonds, bonds that enable and strengthen unit members.

The central purpose of this technical report on resilience is to identify specific measures of resilience for the team or unit level in organizations. We believe that then leaders will be better equipped to build, foster, and sustain resilience in their organizations. We also believe that developing resilience will increase safety success rates. This report answers four basic questions. 1) What is resilience? 2) Why is it important for individuals and small units to be resilient? 3) What accounts for positive responses and adjustments in some individuals and organizational units and not in others? and 4) How can leaders build, foster, measure, and sustain resilience in their organizations?

We begin by introducing information on military operational stressors and describes the physiological and psychological affects and consequences they have on deployed service men and women, then offer a literature review on resilience and leadership. The report builds a conceptual framework as a foundation for unit resilience, to propose recommendations on how leaders can improve the resilience, combat effectiveness and sustainability of combat units.

LITERATURE REVIEW

In this section, we summarize a core set of literature organizational resilience, paying particular attention to the team or group level of analysis. Moreover, we provide the reader with a basic understanding of the differences between individual, group, and organizational resilience, the characteristics of each, and how organizations can build and sustain resilience for the long-term.

A.   MILITARY COMBAT OPERATIONAL STRESSORS

When our service men and women deploy into any theater of operation, they encounter a sustained series of stressors unlike any they would encounter at home station (Bartone, 2006, p. S133). "These stressors can lead to a variety of negative health consequences, both physical and mental, for exposed individuals" (Bartone, 2006, pp. S132-S133). To reduce the cases of PTSD and suicides in the combat zone, leaders must have a keen understanding of physiological and psychological effects of sustained stress on those deployed. According to Bartone (2006):

> *Extensive research with U.S. military units deployed to Croatia, Bosnia, Kuwait, and Saudi Arabia from 1993 to 1996, including interviews, observations, and survey data aimed to identify the primary sources of stress for Soldiers on operations…(found that)…there are five primary psychological stress dimensions in modern military operations.* (pp. S133-S134)

These psychological stressors, coupled with the increase frequency and length deployments due to lower troop levels and higher manpower commitments, ultimately combine to create a sixth dimension called "workload" as depicted in Table 2. (Bartone, 2006, p. S134). According to the Department of the Army (2010), "increasing awareness of potential risk factors affecting Soldiers will assist leaders and program/service providers to make timely and effective interventions" (p. 26).

Stressor	Characteristics
1. Isolation	☐ Remote location ☐ Foreign culture and language ☐ Distant from family and friends ☐ Unreliable communication tools ☐ Newly configured units, do not know your coworkers
2. Ambiguity	☐ Unclear mission or changing mission ☐ Unclear rules of engagement ☐ Unclear command or leadership structure ☐ Role confusion (what is my job?) ☐ Unclear norms or standards of behavior (what is acceptable here and what is not?)
3. Powerlessness	☐ Movement restrictions ☐ Rules of engagement constraints and response options ☐ Policies preventing intervening, providing help ☐ Forced separation from local culture, people, events and places ☐ Unresponsive supply chain – trouble getting needed supplies and repair parts ☐ Differing standards of pay, movement, behavior, etc., for different units in the area ☐ Indeterminate deployment length – do not know when we are going home ☐ Do not know or cannot influence what is happening with family back home
4. Boredom (Alienation)	☐ Long periods of repetitive work activities without variety ☐ Lack of work that can be construed as meaningful or important ☐ Overall mission or purpose not understood as worthwhile or important ☐ Few options for play and entertainment
5. Danger (Threat)	☐ Real risk of serious injury or death, from: ☐ Enemy fire, bullets, mortars, mines, explosive devices, etc. ☐ Accidents including "friendly fire" ☐ Disease, infection, toxins in the environment. ☐ Chemical, biological, or nuclear material used as weapons
6. Workload	• High frequency, duration, and pace of deployments • Long work hours and/or days during the deployments • Long work hours and/or days in periods before and after deployments

Table 1.   Primary Stressor Dimensions in Modern Military Operations.

Due to "operational and security concerns," those deployed have more restrictions than

choices (Bartone, 2006, p. S135). Restrictions on dress, behavior, communication, movement,

and interaction with the indigenous population can add to a feeling of powerlessness (Bartone,

2006, p. S135). Additionally, differing standards on length of deployments (4 months to 15 months) between the services, isolation from family and friends, ambiguity of individual roles or unit missions, and boredom associated with operational routines can all add to the stress of deployments for individuals and units (Bartone, 2006, p. S135). According to Barnes (2010), "U.S. Army data also shows (that) the suicide rate is higher on forward-operating bases where Soldiers have easy access to phones and computers with which to call home, and lower in more primitive outposts" (p. A3). Because of this easy access to stressors of home, those deployed must not only deal with the separate stressors of deployment, but must also deal with the family, financial, children, and or personal relationship problems back home with which they have no ability to influence (Barnes, 2010, p. A3).

Service men and women deployed in support of Operation Enduring Freedom (OEF) and Operation Iraqi Freedom (OIF), too, experience danger and the potential for random acts of terror as part of an occupational safety hazard on a daily basis. Acts such as Improvised Explosive Device (IED) attacks, suicide bombings, and sniper and mortar attacks all have a potential for physical and psychological damage that disrupts the routine operation and lessens the combat effectiveness of individual Soldiers and units. According to Schouten, Callahan, and Bryant (2004), "violence, regardless of fatalities" can produce fear and expectant reactions predictive of "psychological and somatic symptoms" as well as other negative effects such as "decreased productivity, job neglect, decreased performance and job dissatisfaction" (p. 230). According to Schouten et al. (2004), there is "especially compelling evidence that people who have witnessed intentionally violent deaths, as well as colleagues of the victims, experienced intense, prolonged symptomatology (anxiety, depression, and PTSD)" (p. 230).

The increased frequency, length, and high Operations Tempo (OPTEMPO) of deployments that individuals and military units experience, too, can have a negative effect on health. According to Bartone (2006), "increased deployments entail other stressful changes in military units as well, such as an increased number (and intensity) of training exercises, planning sessions, and equipment inspections, all of which increase the workload and pace of operations" (p. S133). Furthermore, he states that, "more frequent deployments also involve more family separations, a recognized stressor for Soldiers" (p. S133). This stressor is not only while deployed, but individuals experience this separation in Garrison as well during train up for deployments and after deployments as they "work overtime to assure all vehicles and equipment are properly cleaned, maintained, and accounted for" (Bartone, 2006, p. S135). These stressors paired with the overall increased pace can cause burn out and suffer from "work related sleep deprivation" if not properly managed by leaders (Bartone, 2006, p. S136). While all of the major stressors outlined in Table 1, are spoken of individually, the truth is that each of these stressors interact and overlap one another and leaders must be concerned with the cumulative effect of the multiple stressors on their Soldiers and units.

Along with these psychological stressors, deployed Soldiers also must deal with the physiological effects of sustained stress on both their physical and mental health. According to an article published in the American Journal of Public Health (2010), for those returning from Iraq and Afghanistan "studies report rates of post-traumatic stress disorder (PTSD)…ranging from 4% to 31% and rates of depression ranging from 3% to 25%" (Kline et al., 2010, p. 276). Additionally, according to Kline et al., (2010), the Office of the Army Surgeon General reports:

> *Mental health problems in 11.9% of those (Soldiers) with 1 deployment, 18.5%*
> *with 2 deployments, and 27.2% with 3 or 4 deployments. National Guard and*
> *Reserve troops are more vulnerable than active-duty troops, with 35.5% of Guard*

troops at mental health risk 6 months after deployment compared with 27.1% of active duty Soldiers. (p. 276)

Furthermore, Kline et al., (2010), state that the physical effects of deployments range from wounds suffered in combat (39,885 service members wounded as of September 4, 2010 according to the Defense Manpower Data Center, 2010a,b) to "orthopedic injures" with pain being the most commonly reported symptom (p. 276).

While individuals deal almost exclusively with stressors, groups and organizations collectively deal with environmental changes that cause stress on the organization. In a military operational context, this resembles a units' reaction to changes in the operational and tactical environments. In this context, however, the stressors of individual members must not be marginalized or ignored since the pejorative affects of stress on individual performance will ultimately affect the collective performance, competence, and capability of the group. The question then becomes, what tools, strategies, or theories can be applied to assist individuals and military units in building resilience in an effort to effectively cope with stress (Bartone, 2006, p. S136).

B.   REACTIONS TO AND COPING WITH STRESS

Resilience is defined as "the capacity for adaptability, positive functioning, or competence following chronic stress or prolonged trauma" (Sutcliffe & Vogus, 2003, p. 96). While some people are predisposed to react negatively to stressful situations:

> *For others, stress is experienced more favorably. Their physical condition, personality characteristics, and social support mechanisms mediate the effects of stress and produce resiliency, or the capacity to cope effectively with stress. (Whetten & Cameron, 2002, p. 107)*

For those individuals that react positively in stressful situations, their resilience in essence shields them from the negative physiological and psychological effects of the stressors that they encounter (Whetten & Cameron, 2002, p. 108).

Strategies to eliminate or mitigate stress fall into three major categories called enactive, proactive and reactive (Whetten & Cameron, 2002, p. 108). Enactive strategies seek to "create, or enact a new environment for the individual that does not contain the stressors" (p. 108). This may be the very best situation for Soldiers who are immediately at risk for harming themselves or others, but the realities of political, tactical and strategic necessity may not allow for the vast majority of Soldiers under stress, to be removed from the stressful conditions and situations experienced in the combat zone. In his research, British psychiatrist Michael Rutter, stated that "the promotion of resilience does not lie in the avoidance of stress, but rather in encountering stress at a time and in a way that allows self-confidence and social competence to increase through mastery and appropriate responsibility" (Almedom, 2005, p. 259).

The key is to foster ways to deal with negative effects of stress, and prepare for future setbacks. This is the role of proactive strategies. Proactive strategies are designed to allow individuals to build individual capacity and resilience. This in turn provides individuals with greater internal reserves allowing them to effectively resist the negative physiological and psychological effects of stress (Whetten & Cameron, 2002, pp. 108-109). Reactive strategies are immediate and have the potential to ameliorate stress responses. The problem with reactive strategies, however, is that the effects on reducing stress are short lived, and need to continually repeated, can be have deleterious effects on individual and ultimately group functioning.

Figure 1 contents:

Experiencing Stress

Stressors
Isolation
Ambiguity
Powerlessness
Boredom
Danger
Workload

Resilience
Physical
Psychological
Social

Reactions
Physiological
Psychological

Managing Stress

	Enactive Strategies	Proactive Strategies	Reactive Strategies
Purpose	Eliminate Stressors	Develop resilience strategies	Learn temporary coping mechanisms
Effects	Permanent	Long term	Short term
Approach	Enactive	Proactive	Reactive
Time Required	Long time	Moderate time	Short time

Figure 1.   A General Model for Combat Stress.

However, effectively dealing with stressors alone is not resilience, but merely one of the

desired components of resilience. According to Robert H. Pietrzak (2010),

> *An understanding of associations between resilience, social support, PTSD and depressive symptoms, and functioning in OEF/OIF veterans is important, as it may help guide the development of interventions to enhance resilience and support, and promote successful readjustment to civilian life after deployment (p. 189).*

For individuals deploying to, engaged in, and returning from combat operations, enactive and

reactive strategies to reduce stressors are not sufficient to build long-term resilience and

sustainability for units in combat. This is because under enactive strategies, operational

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conditions may not always permit for individuals under duress to be removed from the combat zone (i.e., away from the stressor) and reactive strategies only provide temporary relief from stress. Therefore, units must strive to mitigate stressors through proactive strategies that develop coping mechanisms, build resilience, and enhance the long-term capacity of individuals and military units to deal with future stressors.

C. ARMY MODELS AND PROGRAMS FOR COMBAT STRESS

1. COMBAT AND OPERATIONAL STRESS EFFECT MODEL

In their article, *Building Psychological Resiliency and Mitigating Risks of Combat and Deployed Stressors Faced by Soldiers,* Castro and Hoge (2005), of the Walter Reed Army Institute of Research, state that "combat is arguably the most mentally, physically, and emotionally demanding enterprise that a Soldier engages in" (p. 13-1). This is because those in combat could potential face a myriad number of combat stressors and potentially traumatic events (PTE) that can "significantly impact the unit or the Soldiers experiencing them" (Department of the Army, 2009, p. 1-2). The Department of the Army (2009), defines a PTE as "an event which causes an individual or group to experience intense feelings of terror, horror, helplessness, and or hopelessness" (p. 1-3).

From a military perspective, units that deploy to combat are exposed to a military specific set of stressors that are experienced before, during, and after combat operations. (Department of the Army, 2009, p. 1-3). Combat stressors, and PTEs can combine to induce combat operational stress behaviors (COSB) or behavioral reactions that can be either positive adaptive stress reactions which "enhance individual and unit performance" or negative combat operational stress responses (COSR) which are easily discernible reactions experienced immediately following a

traumatic event (Department of the Army, 2009, p. 1-3 – 1-5). Examples of COSRs include

"panic", "anxiety", and or "depression" (Department of the Army, 2009, p. 1-4).

Post combat and operational stress describes a robust range of stress reactions that "may

be experienced weeks or even years after combat and operational stress exposure" (Department

of the Army, 2009, p. 1-4). These reactions range from positive outcomes or post-traumatic

growth (PTG) as a result of stress exposure (Department of the Army, 2009, p. 1-4). Examples

of PTG include "improved relationships," and an "enhanced sense of personal strength, and

spiritual growth (Department of the Army, 2009, p. 1-5). They too, however, may result in

negative outcomes ranging from "mild COSR" to "more severe symptoms associated with

PTSD" (Department of the Army, 2009, p. 1-5).

The Combat and Operations Stress Effects Model, depicted in Figure 2, looks at how

combat and operational stressors and PTEs result in positive adaptive reactions or PTG or

negative reactions associated with COSR and or PTSD (Department of the Army, 2009, p. 1-5).
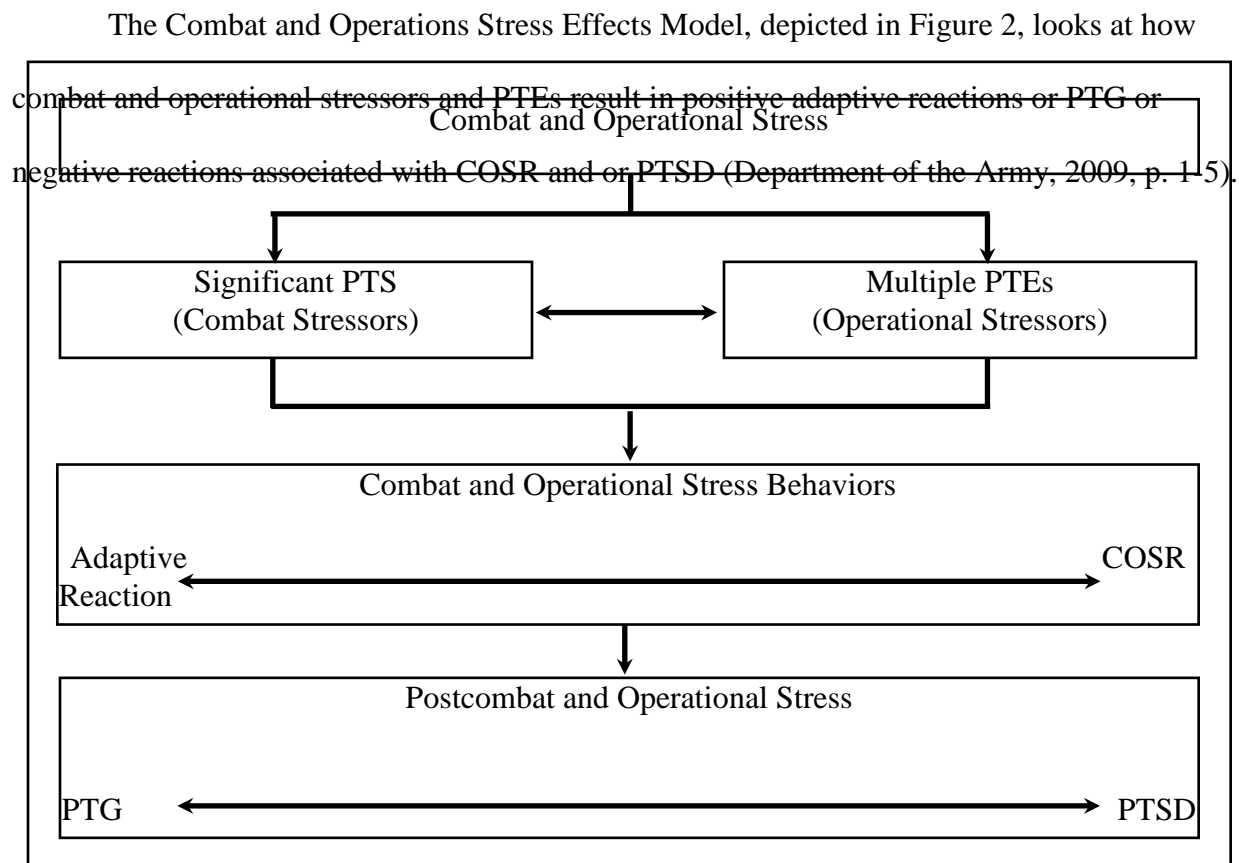
Figure 2.   Combat and Operational Stress Effect Model.
2.   **SOLDIER COMBAT AND WELL-BEING MODEL**

Appearing in the 2009 Mental Health Advisory Team VI reports on both Iraq and

Afghanistan, the Soldier Combat and Well Being Model (see Figure 3) contains the elements

identified in the Soldier Well Being Survey which was adapted from the Land Combat Study

conducted by Walter Reed Army Institute of Research (WRAIR) (Office of the Surgeon General,

2009a&b, p. 12). The concept behind the model is that "Behavioral Health (BH) rates are driven

by risk factors" which can be broken down into three major categories (Office of the Surgeon

General, 2009a&b, p. 12). These factors are then subsequently potentially reduced by identified

resilience factors and the outcome is either an observable increase or decrease in the Behavioral

Health (BH) category. This model too is similar to the General Model for Combat Stress

identified in Figure 3. However, it does not identify the type and length of available strategies
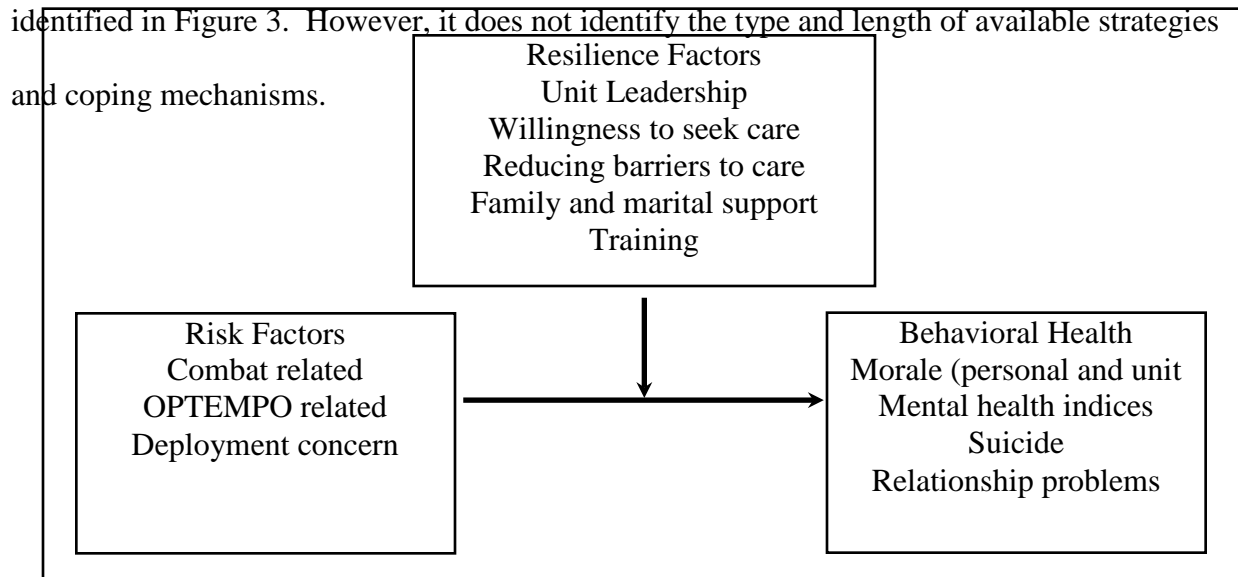
and coping mechanisms.

Figure 3.   Soldier Combat & Well-Being Model.

3. BATTLEMIND TRAINING

The Department of the Army too, has recognized the need to build resiliency in both individual Soldiers and combat units in an effort to improve the mental health and sustainability of Soldiers and units in combat. In order to do so, the U.S. Army implemented a "psychological resiliency building program" which was termed Battlemind in 2007 (Department of the Army, 2009, p. 3-8 and Addler, 2009, p. 1). According to the Department of the Army (2010), "programs and services that promote resiliency are key to decreasing suicidal and high risk behavior and ensuring personnel readiness" (p. 3).

Battlemind, is a term that "describes the Soldier's inner strength and courage to face fear and adversity during combat and speaks to resiliency skills that are developed to survive" (Department of the Army, 2009, p. 3-8). When the term Battlemind is used as an acronym, it identifies the following 10 combat skills:

- ***B**uddies (Cohesion)*
- ***A**ccountability*
- ***T**argeted Aggression*
- ***T**actical Awareness*
- ***L**ethally Armed*
- ***E**motional Control*
- ***M**ission Operational Security*
- ***I**ndividual Responsibility*
- ***N**on-defensive Combat Driving*
- ***D**iscipline and Ordering (Department of the Army, 2009, p. 3-9)*

According to the Department of the Army (2009), "Battlemind training is designed to prevent or reduce the severity of combat related BH problems through a strength based approach" rather than focusing on the "negative effects of combat" (p.3-8). This is because

"individuals experiencing positive emotions, compared to neutral emotions," recover more "rapidly from a negative emotional state" (Rhee, n.d., p. 1).

The training itself, is a module based training program for "Soldiers, leaders and United States Army Reserve (USAR) Soldiers" administered both pre and post deployment (Department of the Army, 2009, p. 3-8). Pre-deployment Battlemind training is focused on building "self-confidence and mental toughness" while simultaneously identifying individual and leader actions necessary to combat stress (Department of the Army, 2009, pp. 3-8 - 3-9). Post deployment training conversely focuses on transitioning the Soldier back to the Garrison elements of civilian life through training on "safety, relationships" and "common reactions and symptoms from combat" as well as "addressing barriers which prevent Soldiers from seeking help" (Department of the Army, 2009, p. 3-9).

4.   COMPREHENSIVE SOLDIER FITNESS (SCF) PROGRAM

The Army too, has continued to spend significant time and resources in research and programs to prevent suicide, PTSD and potentially fatal risk behaviors that often result in "equivocal deaths" (Department of the Army, 2010, p. 1). This research has led to a "holistic and multi-disciplinary approach" to address these risks not only for deployed Soldiers, but Soldiers in Garrison as well (Department of the Army, 2010, p. i). In an effort to improve upon the Battlemind training system, the Department of the Army established the Directorate of Comprehensive Soldier Fitness (CSF) as part of the Army G3/5/7 in October of 2008.

The leading effort in this new campaign, that focuses on the mental fitness of Soldiers and how the Army addresses "cumulative stress on the force," is the "Comprehensive Soldier Fitness" (CSF) program (Department of the Army, 2010, p. iii). According to the Department of the Army (2010), "the overarching goal of this concerted effort is to increase the resiliency in our

Soldiers and Families who continue to serve under high operational tempo" daily (Department of the Army, 2010, p. iii). The program itself, takes a lifelong learning approach to resilience, by recognizing that resilience is not built on a single class, event, or experience, but must be developed continuously over time (Department of the Army, 2010, p. 32). The program focuses on "five dimensions of strength" as depicted in Table 2 (physical, emotional, social, spiritual, and family) and utilizes "individual assessments, tailored with virtual training, classroom training, and embedded resilience experts" in order to provide Soldiers with the tools and training necessary to face the "physical and psychological demands of sustained combat operations" (Department of the Army, n.d., p. 1).

Dimension	Goal
Physical	Performing and excelling in physical activities that require aerobic fitness, endurance, strength, healthy body composition and flexibility derived through exercise, nutrition and training.
Emotional	Approaching life's challenges in a positive, optimistic way by demonstrating self-control, stamina and good character with choices and actions.
Social	Developing and maintaining trusted, valued relationships and friendships that are personally fulfilling and foster good communication including a comfortable exchange of ideas, views and experiences.
Spiritual	Strengthening a set of beliefs, principles or values that sustain a person beyond family, institutional and societal sources of strength.
Family	Being part of a family unit that is safe, supportive and loving and provides the resources needed for all members to live in a healthy and secure environment.

Table 2.   Five Dimensions of Strength (from the Department of the Army).

Although there is a program in place in the Army to instill resilience in Soldiers and combat units, the steady rise in both suicides, PTSD and mental health problems coupled with the decrease in unit morale since the onset of the wars in Iraq and Afghanistan, warrants an additional look how to build resiliency in Soldiers and units (Office of the Surgeon General, 2009a, b). Additionally, while the five dimensions described in the CSF program describes some of the components desirable for personal resilience, dimensions for units and organizations are non-existent. Furthermore, from this perspective, what is lacking for military units is an assessment tool that allows leaders to evaluate the level of resilience in their units (at the group and organizational level) before, during, and after operational (combat) deployments.

D.   RESILIENCE

1.   OVERVIEW

A review of the literature present several different definitions of resilience. These views rest largely in how different fields define how individuals, groups, and organizations react to and deal with stressors as well as an apparent discrepancy between whether resilience is a process or a personality trait (Sutcliffe & Vogus, 2003, pp. 94-110). Furthermore, while the prevailing literature on resilience at the organizational level is based upon studies related to business and organizational theory, even the studies of resilience above the individual level cannot agree upon a definition, and its characteristics. Whereas studies on organizational resilience have been going on for decades, researchers have not reached a consensus on "an agreed upon definition of organizational resilience and the key characteristics that must be present in order for an organization or an individual team to adapt to change in a resilient manner" (Altman-Dautoff, 2001, p. 4).

There are numerous theories about what characteristics, conditions and or attributes are necessary for resilience to thrive and grow in individuals, groups, and organizations. Although these theories vary in different ways, themes about what is necessary for resilience exist (Altman-Dautoff, 2001; Comfort, 1994; Coutu 2002; Hills, 2000; Jarrett, 1997; Lengnick-Hall 2010; Perez-Sales et al. 2005; Pietrzak, 2010; Powley, 2009; Redman, 2005; Rhee, n.d; Sutcliffe & Vogus, 2003; Wybo 2004). We look into these differing views and themes in the paragraphs to follow.

2.   DEFINING RESLIENCE

Resilient individuals, groups and organizations face the same stressors, challenging conditions and harsh environments daily that non-resilient individuals, groups and organizations do. However, according to Altman-Dautoff (2001), "they typically regain their equilibrium faster, maintain higher levels of productivity and quality in their work, preserve their physical and emotional health, and achieve more of their objectives" (p. 16). Additionally, their capacity to handle future challenges and times of uncertainty is increased every time they successfully overcome an obstacle.

Academic research in the field of resilience began in the early 1960's with the study of children with schizophrenic parents (Coutu, 2002, p. 47). The focus of these early studies was to determine why children of schizophrenic parents "did not suffer psychological illnesses as a result of growing up with them" (p. 47). These early studies too, focused on resilience as a personality trait and the children deemed to possess this quality were called "invulnerable," or "stress resistant," however, agreements that the term invulnerable, "promised more than it provided" led to "resilient" becoming the most agreed upon term to describe them (Altman-Dautoff, 2001, p. 20 & Sutcliffe & Vogus, 2003, p. 99). Overtime, as the study of resilience

expanded into different fields of study, with different perspectives on human interaction, it has

focused on resilience as a process vice a personality trait (Sutcliffe & Vogus, 2003, p. 100). This

expansion too, resulted in several differing views and definitions of resilience (Altman-Dautoff,

2001; Comfort, 1994; Coutu 2002; Hills, 2000; Jarrett, 1997; Lengnick-Hall 2010; Perez-Sales et

al. 2005; Pietrzak, 2010; Powley, 2009; Redman, 2005; Sutcliffe & Vogus, 2003; Wybo 2004).

Lengnick-Hall (2010) defines resilience as "the ability to rebound from unexpected,

stressful, adverse situations and pick up where they left off" (p. 2). This view of resilience is very

similar to Wildavsky's view that "resilience is the capacity to cope with unanticipated dangers

after they have become manifest, learning to bounce back" (Comfort, 1994, p. 157 & Sutcliffe &

Vogus, 2003, p. 96). And very similar to one outlined in organizational theory which defines

resilience as "(1) the ability to absorb strain and preserve (or improve) functioning despite the

presence of adversity or (2) an ability to recover or bounce back from untoward events"

(Sutcliffe & Vogus, 2003, p. 96). Similarities can also be found in crisis management literature:

"resilience implies an ability to resume an original position after crisis and an adaptability

contingent on proven usefulness within a specific environment" (Hills, 2000, p. 117). This

particular view of resilience is "often tied to hardiness" or the "ability to react to stressful events

with adaptive interpretations and actions" (Lengnick-Hall, 2010, p. 2). This adaptive view, too,

is similar to one offered by Robert Pietrzak (2010) who defined resilience as "an individual's

capacity to successfully adapt to change in the face of adversity" and one offered by Perez-Sales

and colleagues (2005) who defined resilience as "successful adaptation to stressful situations

despite risk and adversity" (Pietrzak, 2010, pp. 188-189 & Perez-Sales et al., p. 380). All of

these views on resilience emphasize coping strategies that allow individuals, groups, and

organizations to maintain high levels of performance in stressful situations and return to

normalcy after the situation has passed "while simultaneously avoiding or limiting dysfunctional or regressive behaviors" (Lengnick-Hall, 2010, p. 2).

A contrasting view of resilience in the field of psychology defines resilience as "a personality characteristic of the individual or as a set of traits encompassing general sturdiness and resourcefulness and flexible functioning in the face of challenges" (Sutcliffe & Vogus, 2003, p. 96). Similarly Strumpfer (1995), defined resilience as "a pattern of psychological activity which consists of a motive to be strong in the face of inordinate demands" (Almedom, 2005, p. 258). According to Sutcliffe and Vogus (2003), defining resilience as a personality trait, rather than a process, may undermine our understanding of resilience and introduce stereotypes. Therefore, a psychological perspective of resilience limits appreciation for more dynamic of groups and organizations. A psychological view also ignores the inclusive characteristics groups, teams, and organizations, and that success or failure is measured as a whole or entity, not the sum of the individuals.

Another view of resilience is derived from research in child and family development and defines resilience as "the capacity for adaptability, positive functioning, or competence following chronic stress or prolonged trauma" (Sutcliffe & Vogus, 2003, p. 96). According to Sutcliffe and Vogus (2003), resilience from a developmental perspective is not the result of successfully reacting to a single stressful situation, but as the result of dealing with and handling stress overtime and emerging from each stressful situation stronger and more capable to deal with future stressors, situations and challenging conditions (pp. 96-97). Resilience from this perspective is an iterative, lifelong and developmental process in which each stressful experience or situation conquered adds to the capability of the individual, group, or organizations to handle future stress. Resilience therefore, links closely to adaptability but also "recognizes both the

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possibility of fallibility and the probability of successful coping" (p. 97). Because of this realistic and lifelong learning approach to dealing with stressors, for the purpose of this paper, we will adopt the developmental perspective of resilience and define resilience as "the capacity for adaptability, positive functioning, or competence following chronic stress or prolonged trauma" (Sutcliffe & Vogus, 2003, p. 96). The characteristics, attributes, and requirements of resilience vary at different levels of organizational structure.

3. INDIVIDUAL RESILIENCE

One way to define individual resilience is as "an individual's ability to resist or effectively cope with stressors, to tolerate risks, and to be flexible and confident of his or her ability to successfully deal with such situations with minimal untoward effects" (Altman-Dautoff, 2001, p.11). Put simply, individual resilience can be summarized as an "individual's ability to positively respond to stressful situations" (Jarrett, 1997, p. 219). In order for an individual to be resilient, he or she must have access to interpersonal and group interactions, as well as personal experiences and resources that enhance their "growth, competence/expertise and efficacy" which will ultimately provide them with motivation allowing them to "succeed in their future endeavors" (Sutcliffe & Vogus, 2003, p. 100, 106). Individual resilience is seen as a lifelong "dynamic process that varies between individuals and overtime within individuals" (Jarrett, 1997, p. 219). According to Doe (1994), this is because "resilient individuals view change as an opportunity to grow, learn and achieve new results rather than as a threat to themselves or their environment" (p. 23). This in turn allows resilient individuals the ability to effectively use stressful situations to increase their knowledge base and ability to effectively cope in future situations through flexible responses and adaptations (Altman-Dautoff, 2001, p. 11, 19). According to Jarrett (1997), "resilient individuals have a lowered susceptibility to risk and are characterized by a relatively consistent pattern of successful coping" (Jarrett, 1997, p.

219). Understanding individual resilience is important because the interaction of organizational members is the building block for group level and organizational resilience (Lengnick-Hall, 2010, p. 2). It is also important because "a resilient organization requires a resilient workforce" (Doe, 1994, p. 23).

4.   GROUP RESILIENCE

Similarities between individual and group level resilience in that both "focus on factors that promote competence, encourage growth, and restore efficacy" (Sutcliffe & Vogus, 2003, p. 101). Group level resilience, however, focuses on the collective ability of the group to learn new skills, build collective efficacy, and positively adapt and adjust to change, challenging conditions, environments, and stressors over the long-term (Sutcliffe & Vogus, 2003, pp 101-103). Group resilience is nested in the ability of the group to improve as a whole through the collective enhancement of group knowledge and experience, through organizational learning coupled with adequate resources to overcome obstacles (Sutcliffe & Vogus, 2003, p. 106). This would in turn provide a group, or small unit with a diverse repertoire of capabilities and competences with which to respond to adverse situations (Sutcliffe & Vogus, 2003, pp 101-103).

One important aspect of group or organizational resilience is organizational learning (Wybo, 2004). The key, according Redman (2005), is that groups remain focused; goal oriented, and utilizes the knowledge, information and experiences gained from adverse situations to improve organizational learning and move the group towards their desired end-state (Redman, 2005, p. 74).

> *"In sum, processes that promote competence, enhance human, social, and material assets (e.g., learning capabilities) and reduce risks or stressors (i.e., the more skills the group can leverage, the less they stress) increase the likelihood of positive adjustments because they enhance a groups capability to register and handle complexity and increase their motivation and persistence in handling challenges." (Sutcliffe & Vogus, 2003, p. 102)*

5. ORGANIZATIONAL RESILIENCE

Organizations are social collectives composed of individuals formed into groups whose competence, efficacy, skills, knowledge and resilience capacity adds to the collective capacity of the organization through complex social interactions (Lengnick-Hall, 2010, pp. 3-4). Organizational resilience therefore is "an organization's ability to absorb intense levels of change with a minimum display of dysfunctional behavior while maintaining high levels of performance and continuing to make use of the system's assets" (Altman-Dautoff (2001, p.12). Similar to group level resilience, organizational resilience processes strive to improve an organization's efficacy, competence, growth, and overall learning ability "through enhancing the ability to quickly process feedback and flexibly rearrange or transfer knowledge and resources to deal with situations as they arise" (Sutcliffe & Vogus, 2003, pp. 103-104). This is because "the experience gained by people in crisis situations is invaluable source of information for organizational learning" (Wybo, 2004, p. 33). To do so, however, takes a long-term and often lifelong perspective which "can identify which of many seemingly beneficial near-term actions truly contributes to long-term resilience and recognize how some seemingly rational choices lead, in the end, to undesirable outcomes" (Redman, 2005, p. 71).

6. CHARACTERISTICS OF RESILIENCE

Although resilience can assist in ensuring the longevity of groups and organizations in adverse environments, groups still require structure to effectively operate with minimal dysfunction under challenging conditions. To do so, they must be organized in a way that provides guidance, direction, and proper allocation of resources to accomplish the goals of the organization while simultaneously meeting the needs of its members. From this perspective

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small units or groups are seen as "micro-systems" that operate within the larger "macro system" of the organization (Altman-Dautoff, 2001, p. 32). Altman-Dauttoff (2001) draws from Parsons (1951) functional theory to suggest that characteristics required for groups or organizations to ensure continuity:

1. *There must be a set of values that defines the overall meaning and purpose which guides the groups work*
2. *The group must have adequate resources available to meets its goals.*
3. *The roles of group members must be clear, and the members must see value in the work that they are doing.*
4. *There must be adequate coordination in the form of leadership to ensure that the resources are available and used by the group to support them in attaining their goal (Altman-Dautoff, 2001, p. 32).*

In short, this theory ties the individual roles and responsibilities of leaders and group members to the overall goals of the group or organization.

We propose four characteristics of resilient organizational units: concerted leadership, adequate resources, enhancement of organizational learning, and flexibility/adaptability in the face of adversity.

Unit Resilience Characteristic	Description
Concerted Leadership	Providing guidance direction and proper allocation of resources to accomplish group/organizational goals with minimal dysfunction as well as skillfully building teams capable of facing adversity
Adequate Resources	To include human, social support, emotional and material capital necessary to overcome obstacles, encourage growth, and improve competence and efficacy
Learning Orientation	Accumulating knowledge, enhancing competences, & increasing efficacy through processes that increase the capability of the group to handle future stressful situations and environments
Flexibility/Adaptability	Ability to adapt, improvise and provide flexible responses to adverse situations that do not waste the units resources

Table 3.   Organizational Unit Resilience Characteristics.

These characteristics are necessary for organizational units to build resilience by enhancing the collective ability of the group to learn new skills, build collective efficacy, and positively adapt and adjust to change, challenging conditions, environments, and stressors over the long-term. It is from these characteristics we build measures for organizational unit resilience. The next section of this report outlines the assessment dimensions.

ASSESSMENT TOOL DIMENSIONS

A.   OVERVIEW

Any effective program to mitigate or eliminate stressors, suicide, post-traumatic stress disorder (PTSD) and build unit resilience for complex and arduous combat environments, must begin with planning, assessment and monitoring conducted at pre-established intervals before, during, and after deployments. Implementing a process at the unit level would involve discernible leadership and the availability of an assessment tool to determine the current level resilience in the unit and identify areas of concern or emphasis for leaders. Additionally, if properly utilized an assessment tool could assist leaders in improving the overall effectiveness and sustainability of our service men and women and units in combat, as well as, assist them in mitigating or eliminating stressors, suicides and the effects of PTSD on deployed service men and women and for Soldiers returning from deployments.

It is recommended that such a tool, be used in conjunction with a command climate survey and other behavioral health assessment surveys (e.g., Unit Behavioral Health Needs Assessment Survey, or UBHNAS). This is because the combined picture of these three tools would provide a commander with an invaluable overall assessment of unit moral, training, readiness and discipline concerns coupled with the Behavioral Health (BH) and resilience needs of the organization. Conducting a resilience assessment in conjunction with these other tools would also minimize the training and operational distracters for the unit preparing for, returning from, or engaged in combat operations.

B. GUIDELINES FOR ASSESSING RESILIENCE

In order to properly develop a unit level resilience assessment tool that can be integrated with existing tools (such as the Command Climate survey or UBHNAS), survey questions must be developed that coincide with the four organizational unit resilience characteristics identified in the prevailing literature (concerted leadership, adequate resources, enhancement of organizational learning, and flexibility/adaptability in the face of adversity,), as well as, a tool to mathematically measure and score the results. One possible solution is that survey questions on resilience could be added to existing tools and scored separately, or a separate survey could be conducted in conjunction with the other tools. Additionally, survey questions developed, must be unbiased and not lead unit members towards negative responses or incite perceived symptoms or conditions in the voluntary respondents. Furthermore, the following basic survey guidelines must be followed to get the best benefit out of the conducted survey:

- The survey can be command directed, (i.e., attendance to the survey is mandatory) however, responses to the survey must be voluntary in order to receive candid results.
- The survey must be anonymous and leaders must respect the anonymity of the respondents.
- The commander at the level that the survey was conducted owns the results and any associated data with the survey (similar to command climate survey) for his action. However, mathematical results by unit, type, deployment length, frequency, and location could be maintained externally for trend analysis and program improvement.
- Mathematical results of the survey should be presented to the unit commander for area of emphasis evaluation, education and recommended training and resource allocation.

What must not be lost in the administering of the results of the survey is that the purpose of the tool is to let leaders know the current resilience status of their organization, in order to target areas of emphasis for training, education, resource allocation or intervention in an effort to safeguard the lives and mental state of the Soldiers under their command. The areas of emphasis

(or group/organizational resilience characteristics) are explained in detail in the paragraphs below.

C. FOUR DIMENSIONS OF ORGANIZATIONAL UNIT RESILIENCE

We argue for an organizational unit measure of resilience. This organizational unit level of analysis is based on research that suggests that context, is an important consideration. Resilience develops in a dynamic, negotiated process. Emond's (2010) study submits that peers in a given context "regard one another as resilience resources." Moreover, such a mutual regard of giving and receiving care and support "extends to the negotiated process of peer care and care-giving" (p. 64). This dynamic, negotiated process is a primary mechanism we believe occurs in a team context to produce what we call organizational unit resilience. The nature of that mechanism involves any number of factors, including, but not limited to narrative practices team members engage in to make sense of trials or difficulty (Maitlis, forthcoming); leadership supporting teams with needed resources; flexibility and adaptability of team members; and the learning orientation of the organizational members. We now turn to a description of the key factors associated with organizational unit resilience.

1. CONCERTED LEADERSHIP

Leadership is arguably one of the most deterministic factors of the success or failures of organizations (Pearman, 2000). Resilient leaders provide purpose, guidance, motivation, and direct the allocation of key resources to accomplish the goals of the organization while simultaneously limiting dysfunction and promoting organizational values, learning, growth, and efficacy (Altman-Dautoff, 2001; Lengnick-Hall, 2010; Sutcliffe & Vogus, 2003). They also skillfully build teams that can handle adversity without a drop in performance through training, education, experience, and provide flexible/adaptable responses in crisis situations (Altman-

Dautoff, 2001; Perez-Sales et al. 2005; Sutcliffe & Vogus, 2003). According to Pearman (2000), "a study of 937 articles published in every major journal or bulletin" from 1985 to 2000, cited relationship and team building as paramount to the success of organizational leaders. The data from the research also cited lack of the relationship and team building by leaders as the largest indicator organizational failure.

This underscores the importance of leaders in building teams and developing relationships with subordinates that strengthens unit cohesion and builds trust between leaders and subordinates. Concerted Leadership is a dimension that also improves the resilience and efficacy of organizations while simultaneously contributing to their overall success by binding all resilience factors together *(adequate resources, organizational learning, and flexibility and adaptability in the face of adversity).*

2. ADEQUATE RESOURCES

Organizations as well as units in combat must be properly equipped to face adversity. Resources provide the tools to prepare and sustain organizations for long-term adverse environments. Resources can take a myriad number of forms for units and can be strategic/operational resources such as education, training, equipment, personnel, logistic, medical, and or material support. The can also take the form of human/social support such as group interaction, counseling, social programs, Family Readiness Groups (FRG), Behavioral Health (BH) and or religious support. Leaders must be educated on the resources available to their units, as well as, how to request additional resources that are above and beyond their capabilities to provide. They must also foster an environment that encourages service members and their support groups (spouses, family, friends, and fellow Soldiers) to seek support as needed or provide mechanisms to intervene with the necessary resources on the Soldiers behalf. Resources provide groups/organizations with the tools necessary to reduce stress by increasing

the groups' capabilities to overcome obstacles, while simultaneously increasing the capability of the group to build and sustain resilience for the long-term (Sutcliffe & Vogus, 2003).

3. ORGANIZATIONAL LEARNING

Organizational learning focuses on increasing the cumulative knowledge, skills, capabilities and efficacy of an organization to accomplish its goals in adverse and challenging environments (Sutcliffe & Vogus, 2003). A learning orientation is associated with work on mindful organizing in hospital emergency rooms (Vogus & Sutcliffe, 2007). Professionals in a healthcare context seek ways to be more mindful with the intent to reduce the number of potential errors. One approach to practice learning suggests an orientation and heightened awareness of context, process, and interpersonal relationships.

For military units this involves training necessary to be efficient and effective in a combat environment. However, for military units it also entails collective knowledge, experience, and coping mechanisms necessary to deal with adverse situations and promote resilience and positive functioning under arduous conditions (Sutcliffe & Vogus, 2003). Organizational learning builds resilience by increasing the units' capabilities and competencies in dealing with adversity, while also promoting growth, improving efficacy, and strengthening the capability of the unit and its members in positively dealing with future adverse environments or challenges. To do so properly, the organizational learning process must include mechanisms to learn collectively from mistakes (through lessons learned) and adopt a developmental or lifelong learning perspective where each challenge successfully faced adds to the units' collective ability to resiliently face future challenges.

4. FLEXIBILITY AND ADAPTABILITY

Resilient organizations are ones that are able to improvise and provide flexible and adaptive responsive to adverse situations. Resilient organizational units demonstrate flexibility in

their outlook of difficulty. For example, resilient units collectively see creative solutions to challenging problems, and have a sense of control over their destiny because of their reliance on each other. Flexibility and adaptability is associated with seeing what is positive despite significant challenges and believes that positive growth is a result (Blatt, 2009; (Sinclair & Wallston, 2004). Enabled by concerted leadership and through organizational learning the unit is able learn from past experiences, remain flexible, adapt to changes in their operational environment, and accomplish its goals with minimal dysfunction without wasting the units' finite resources. According Altman-Dautoff (2001), groups and organizations that display "flexibility in dealing with uncertainty" reduce organizational stress by applying approaches to problem solving that allow them to confront, deal with, and overcome obstacles "without being overwhelmed by them" (p. 26).

Concerted Leadership
1. Unit Leaders provide purpose, guidance, motivation, and direct the allocation of key resources to accomplish the goals of the organization
2. Unit Leaders promote organizational values, learning, growth, and efficacy
3. Unit Leaders build teams and developing relationships with subordinates that strengthens unit cohesion and build trust between leaders and subordinates

Adequate Resources
4. The Unit has sufficient strategic, logistic or materiel resources to accomplish their mission
5. Leaders know how to request additional resources above and beyond the units' capability to provide
6. The Unit encourages service members and their support groups (spouses, family, friends, and fellow Soldiers) to seek support as needed or provide mechanisms to intervene with the necessary resources on the Soldiers behalf

Organizational Learning
7. Mechanisms are in place for the unit to enhance unit knowledge learn new skills, build collective efficacy, and positively adapt and adjust to change, challenging conditions, environments, and stressors over the long-term
8. The unit utilizes the knowledge, information and experiences gained from adverse situations to improve organizational learning
9. The unit contains mechanisms (lessons learned) to provide feedback to enhance learn from mistakes and improve unit performance

Flexibility/Adaptability
10. The unit is able to improvise and provide flexible and adaptive responses to adverse situations
11. The Unit is able to adapt to changes in their operational environment, and accomplish its goals with minimal dysfunction and without wasting the units' finite resources
12. The unit is able to reduce organizational stress by applying approaches to problem solving that allow them to confront, deal with, and overcome obstacles

Table 4.   Organizational Unit Resilience Descriptions.

IMPLICATIONS AND CONCLUSIONS

A.   OVERVIEW

As stated previously, leadership is arguably one of the most important factors of the success or failure in organizations (Pearman, 2000). In resilient organizations, concerted leadership is required to implement, build, foster, and sustain resiliency for the long-term. This quality is a necessary element of resilient leaders and organizations as it binds all other resilience dimensions together. However, from the literature review on resilience and leadership we learn that the qualities in military leadership models may fall short in terms of building resilient groups and organizations.

B.   LEADERSHIP

Any study of how to build resiliency in small units, must also look at how we lead, and build leaders. Over the past century, the United States has fought in two World Wars, Korea, Vietnam, Iraq, Afghanistan, and a number of smaller conflicts. As we change the way we fight in accordance with the Contemporary Operating Environment, we too, have changed the way we lead our service men and women in these conflicts. For decades the military has incrementally changed the definition of leadership, and continuously refined the attributes, characteristics, competencies, and values desired to make up the ideal leader (Fallesen, 2006, pp. 1-8). The reason for this evolution was to ensure that leadership, education, and doctrine continued to produce leaders with the requisite qualities, and skills necessary to face the nations' current challenges. Over time, these changes have shifted from focusing on what a leader is, or the traits the leader should ultimately possess, to "what leaders should do" (Fallesen, 2006, p. 8). According to Fallesen (2006), this is because of "the belief that leadership skill can be developed

and improved but the basic elements of character are needed for ethical and effective decision making" (p. 8). These changes, however, neither have occurred overnight, nor in a vacuum, as several prominent think tanks have all contributed to the development of leadership models (see *FM 6-22 Army Leadership: Competent, Confident, and Agile* for more information).

That said, leadership for service men and women has been defined as "the process of influencing people by providing purpose, direction, and motivation to accomplish the mission and improving the organization" (p. 1-2). And although this definition provides a foundation for what a leader is, what a leader should do, and the attributes necessary for ethical and effective decision-making, it does not address the specific war fighting competencies necessary for a warrior-leader to operate in the today's Contemporary Operating Environment (COE).

1.   PENTATHLETE LEADERSHIP MODEL

The Army's Pentathlete Leadership Model provides one model of leadership that draw on these integrated understandings of leadership. For the Army, the term "pentathlete leader" was first used by former Army Chief of Staff, General Peter Schoomaker in 2004 to describe the Army as a "high tech sprinter…bogged down in a counterinsurgency marathon (Montague, 2007, p. 1). In 2006, Former Secretary of the Army, Dr. Francis Harvey expounded upon this analogy by defining the pentathlete leader as:

> *A strong multi-skilled leader that first and foremost is a strategic and creative thinker. A builder of teams. An individual that must be a competent full spectrum warfighter, or an accomplished professional supporting that warfighter. (Montague, 2007, p. 1)*

With an Army fighting two wars the analogy continued to grow and propagate itself into all of the Army's leadership and development courses until it became an independent leadership model in which a pentathlete leader was said to possess a range leadership skills and attributes (Carl, 2006, p. 4). Skills are associated with building leaders and teams, understanding the

cultural context, knowing and understanding political contexts. Attributes include such things as integrity, competence, and empathy.

This model of leadership has become important in the current conflicts in Iraq and Afghanistan because of the need for innovative, adaptive and culturally aware leaders with specific skill sets in diplomacy, governance, and statesmanship to effectively conduct Security, Stabilization, Transition, and Reconstruction Operations (SSTRO) (McElroy, 2007, p. 1). And although according to McElroy (2007), it could be argued that these skills sets already exist in other U.S. Government agencies, the reality is that military leaders "must execute these tasks, since only military organizations are capable of surviving in and stabilizing the hostile post-combat environment(s)" (p. 1). However, no matter which approach you feel is more prudent, problems exist with both models.

2.   PROBLEMS WITH ARMY LEADERSHIP MODELS

The Army Leader Requirements Model, and the Pentathlete Leader Model are very good concepts in theory, to describe the type of leader needed to face the challenges of the future. You would be hard pressed to find anyone who would argue that technically and tactically proficient leader, who was an ethical and effective decision maker in the midst of full spectrum operations, was not exactly what was needed. However, the problem does not necessarily rest with the model itself, inasmuch, as how they are developed and executed.

For instance, according to Robert Carl (2006), "many organizations fail in their development programs because of two pathologies they call productization and ownership is power" (Carl, 2006, p. 5). According to the author, productization can essentially be defined as a draw to the latest fads and trends in leadership that prompt continuous changes to the leadership programs themselves (Carl, 2006, p. 5). The best way to avoid these unnecessary updates is to create a well researched set of competencies ascribed to by the leaders of the organization

specific enough to provide focus, yet, general enough to stand the test of time" (Carl, 2006, p. 5).

On the other hand, ownership in power occurs when "multiple leadership development centers" (or the Non-Commissioned Officer Education System each essentially put their own spin on how leadership is taught, and what essentially is important (Carl, 2006, p. 5), rather than standardizing the program across the military.

3. LEADERSHIP AND RESILIENCE

The military has done well in identifying the qualities, attributes, and skills sets needed for leaders today to face the challenges of tomorrow; however, there is much work still to be done. Leaders at all levels are not only responsible for what their service men and women do, and fail to do. They are also responsible for the health, welfare, safety, morale, training, discipline, and combat readiness of their units. Inherent in that responsibility is the duty of leaders to safeguard the lives and mental state of the individuals under their command. Leadership cannot be divorced from resilience. Resilience must be woven into leadership at all levels to ensure proper integration, implementation, and emphasis. To that end, leaders must be educated on how to properly assist our service members in learning strategies to effectively cope with stress under the most arduous of conditions, in order to improve the effectiveness, and sustainability of our soldiers, sailors, marines, and airmen in combat.

According to Altman-Dautoff (2001), resilient organizations are comprised of resilient leaders who support the members of their organization and "effectively manage the rate of change" versus the ability of the unit or organizations' "to absorb change" (p. 30). Resilient leaders also implement flexible and adaptive responses to change without "draining resources or causing dysfunction which negatively impacts performance" (p. 30). Organizational leaders best support and build resilience in their organizations by positively influencing organizational learning, assuring adequate resources are available to their organizations and "by building a

culture that develops a tolerance for uncertainty and supports communication, feedback, recognition, and continuous learning" (pp. 30-31).

Through functional theory, leaders promote the values of the organization; allocate resources to meet the units' goals, flexibly and adeptly respond to changes and threats in the environment to meet the organizations' goals all while improving processes and building resilience through organizational learning (Altman-Dautoff 2001, Sutcliffe & Vogus, 2003). Leadership models should reflect the characteristics required of leaders to build resilience in their organizations. As Doe (1994) stated "a resilient organizations requires a resilient workforce" and resilient leaders to promote the values, allocate scarce resources, and promote organizational learning that enhances the resilience competencies and capabilities of organizations (p. 23). These resilience characteristics should be built into unit training plans and taught from a developmental and lifelong learning perspective from inception into the military through retirement or separation. This is key, because according to Tarabay (2010), 79% of Army suicides occur within the first three years of service, underscoring the importance of building resilience early in one's career.

C. CONCLUSION AND RECOMMENDED FUTURE RESEARCH

In conclusion, resilience can be defined as "the capacity for adaptability, positive functioning, or competence following chronic stress or prolonged trauma" (Sutcliffe & Vogus, 2003, p. 96). It offers a framework for addressing individual and organizational stressors, suicides, and post-traumatic stress disorder (PTSD) by developing individual and group/organizational capabilities to cope with cumulative effects of stress. In order for units to build resilience for the long-term, they must contain four key resilience characteristics: concerted leadership, adequate resources, enhancement of organizational learning, and flexibility and

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adaptability in the face of adversity. Together, these characteristics coupled with a

developmental and life-long learning perspective enable groups/organizations to build resilience,

by enhancing the collective ability of the group to learn new skills, build collective efficacy, and

positively adapt to change, challenging conditions, environments, and stressors over the long-

term without regressive or dysfunctional behavior. They also enable groups and organizations to

emerge from each of these situations stronger and more capable of handling future adversity.

Furthermore, to implement a process at the unit level, leaders must have access to an

assessment tool to determine the current level of resilience in their unit in order to identify areas

of concern or emphasis. To that end, it is recommended that:

- Such a tool or survey be developed (and used at pre-established intervals before, during, and after deployments) with an emphasis on the four resilience dimensions as well as, a tool to mathematically measure and score the results
- Data collected from the tool or survey be presented to unit commanders by the local for area of emphasis evaluation, education and recommended training and resource allocation
- Mathematical results by unit, type, deployment length, frequency, and location could be gathered and analyzed for trends and program improvement

Building resilience is critical to mission accomplishment, longevity and sustainability of

units in combat. Doing these things at the unit level, may safeguard the lives, mental state, of

our service men and women and units in combat.

LIST OF REFERENCES

Addler, Amy A. (2009). Battlemind Resilience Training Research Accomplishments and Plans (Information Paper). Washington, DC: Department of the Army.

Almedom, A., (2005). Resilience, Hardiness, Sense of Coherence, and Post-traumatic Growth: All Paths Leading to "Light at the End of the Tunnel"? *Journal of Loss and Trauma, 10: 253-265*.

Altman-Dautoff, Diane C. (2001). Exploring individual and organizational resilience as factors in effective transient work teams. Ed.D. dissertation, Pepperdine University, United States - - California. Retrieved October 7, 2010, from ABI/INFORM Global.(Publication No. AAT 3032022).

Blatt, R. (2009). Resilience in entrepreneurial teams: Developing the capacity to pull through. *Frontiers of Entrepreneurship Research, 29* (11), Art. 1.

Broadwell, P. (2009, April 21). Leadership, Petraeus style. *The Boston Globe,* Retrieved June 13,2010, from http://www.boston.com/bostonglobe/editorial_opinion/oped/articles/2009/04/21/leadership_petraeus_style/

Burke, C. (2008). Sorry pentathlete wasn't on the syllabus. *Small Wars Journal*. Retrieved June 5, 2010 from http://smallwarsjournal.com/blog/journal/docs-temp/169-burke.pdf

Cameron, K. S. (2008). *Positive leadership: Strategies for extraordinary performance*. San Francisco, Calif: Berrett-Koehler Publishers.

Carl, R. (2006). Transformation and the making of a pentathlete. (Master's thesis), U.S. Army War College. Retrieved June 5, 2010, from http://www.dtic.mil/cgi-bin/GetTRDoc?AD=ADA449386&Location=U2&doc=GetTRDoc.pdf

Castro, C.A. & Hoge, C.W. (2005). Building Psychological Resiliency and Mitigating Risks of Combat and Deployed Stressors Faced by Soldiers. In *Strategies to Maintain Combat Readiness during Extended Deployments – A Human Systems Approach (pp. 13-1 – 13-6)*

Casualties: Lists and Statistics. *Congressional Research Service.* Retrieved September 26, 2010 from http://www.fas.org/sgp/crs/natsec/RL32492.pdf

Comfort, L. K., & University of California, Berkeley. (1994). *Risk and resilience: Interorganizational learning following the Northridge Earthquake of January 17, 1994*. Berkeley, Calif.: Institute of Governmental Studies, University of California at Berkeley.

Coutu, D. L. (2002). How resilience works. *Harvard Business Review, 80* (5), 46-55.

Defense Manpower Data Center (2010b). OIF Casualty by Type. Retrieved September 26, 2010 from http://siadapp.dmdc.osd.mil/personnel/CASUALTY/oif-total.pdf

Defense Manpower Data Center. (2010a). OEF Casualty by Type. Retrieved September 26, 2010 from http://siadapp.dmdc.osd.mil/personnel/CASUALTY/wotsum.pdf.

Department of the Army (2010). Army Health Promotion, Risk Reduction, Suicide Prevention Report 2010. Washington, DC: Author.

Department of the Army (n.d). Comprehensive Soldier Fitness Brochure.

Department of the Army. (2006). Field Manual 6-22 Army leadership, competent, confident, and agile. Washington, DC: Author.

Department of the Army. (2009). Field Manual 6-22.5 Combat and Operational Stress Control Manual for Leaders and Soldiers. Washington, DC: Author.

Diane L Coutu. (2002, May). How resilience works. *Harvard Business Review, 80*(5), 46-55. Retrieved October 11, 2010, from ABI/INFORM Global. (Document ID: 116098374).

Doe, Peggy J. (1994, July). Creating a resilient organization. *Canadian Business Review, 21*(2), 22-25. Retrieved October 7, 2010, from ABI/INFORM Global. (Document ID: 7596).

Emond, R. (2010). Caring as a moral, practical, and powerful endeavor: Peer care in a Cambodian orphanage. *British Journal of Social Work, 40,* 63-81.

Fallesen, Jon J. 2006. Army characteristics for full range operations. *Center for Army Leadership.* Retrieved June 5, 2010 from http://www.indiana.edu/~rotc/files/fullrangeops.pdf

Fischer, Hannah 2009. United States Military Casualty Statistics: Operation Iraqi Freedom and Operation Enduring Freedom. *Congressional Research Service.* Retrieved September 26, 2010 from http://www.fas.org/sgp/crs/natsec/RS22452.pdf

Gary Hamel, & Liisa Valikangas. (2003, September). The quest for resilience. *Harvard Business Review, 81*(9), 52-63. Retrieved October 20, 2010, from ABI/INFORM Global. (Document ID: 395498971).

GetTRDoc.pdf

Goldman, E., & Casey, A.. (2010). Building a Culture That Encourages Strategic Thinking. *Journal of Leadership & Organizational Studies, 17*(2), 119. Retrieved October 20, 2010, from ABI/INFORM Global. (Document ID: 2038570291).

Harms, P., & Credé, M.. (2010). Emotional Intelligence and Transformational and Transactional Leadership: A Meta-Analysis. *Journal of Leadership & Organizational Studies, 17*(1), 5. Retrieved October 20, 2010, from ABI/INFORM Global. (Document ID: 1954622301).

Hills, A. E. (January 01, 2000). Revisiting institutional resilience as a tool in crisis management. *Journal of Contingencies and Crisis Management*

Jarrett, Robin L. Resilience among low income African American Youth: An Ethnographic Rerspective. "Ethos." Vol. 25, No. 2. *Ethnography and Sociocultural Processes: A Symposum.* (Jun., 1997), pp. 218-229.

Julian E. Barnes. (2010, July 30). U.S. News: Soldiers' Suicides Tied to Problems at Home. *Wall Street Journal* (Eastern Edition), p. A.3. Retrieved November 11, 2010, from ABI/INFORM Global. (Document ID: 2095277341).

Kline, A., Falca Dodson, M., Sussner, B., Ciccone, D., Chandler, H., Callahan, L., & Losonczy, M.. (2010). Effects of Repeated Deployment to Iraq and Afghanistan on the Health of New Jersey Army National Guard Troops: Implications for Military Readiness. *American Journal of Public Health, 100*(2), 276-83. Retrieved October 20, 2010, from ABI/INFORM Global. (Document ID: 1963688591).

Leland, A., and M. Oboroceanu. (2010). American War and Military Operations

Lengnick-Hall, C.A., et al. (2010). Developing a capacity for organizational resilience through strategic human resource management. *Human Resource Management Review.* Retrieved September 13, 2010 from http://www.elservier.com/locate/humres

Linda Hoopes. (1999, May). Team resilience. *Executive Excellence, 16*(5), 16. Retrieved October 7, 2010, from ABI/INFORM Global. (Document ID: 41232592).

Lopes, J. F. (2010). *Theoretical dimensions of small unit resilience*. Unpublished MBA professional report, Naval Postgraduate School, Monterey, CA.

McElroy, K. (2007). Developing the army pentathlete. (Master's thesis), U.S. Army War College. Retrieved June 5, 2010, http://www.dtic.mil/cgiin/GetTRDoc?AD=ADA468972&Location=U2&doc=

McShane, S. L., & Von, G. M. A.Y. (2009). *Organizational behavior: Essentials*. Boston:McGraw-Hill / Irwin.

Montague, K. (2007). Building the pentathlete mind: Army leadership in the contemporary operating environment. Command and General Staff College. Retrieved June 5, 2010,

Office of the Surgeon General, United States Army (2009a). Mental Health Advisory Team (MHAT) 6 Operation Enduring Freedom. Washington, D.C.: Department of the Army

Office of the Surgeon General, United States Army (2009b). Mental Health Advisory Team (MHAT) VI Operation Iraqi Freedom. Washington, D.C.: Department of the Army

Pau Perez-Sales, Priscilla Cervellon, Carmelo Vazquez, Diana Vidales, & Mauricio Gaborit. (2005). Post-traumatic factors and resilience: the role of shelter management and survivours' attitudes after the earthquakes in El Salvador (2001). *Journal of Community & Applied Social Psychology, 15*(5), 368-382. Retrieved October 28, 2010, from Research Library. (Document ID: 929497351).

Paul T. Bartone. (2006). Resilience Under Military Operational Stress: Can Leaders Influence Hardiness? *Military Psychology, 18*(3, suppl), S131-S148. Retrieved June 5, 2010, from Military Module. (Document ID: 1171399971).

Pearman, R. (2000). Behaviors that matter analysis of research data on leadership: success and derailment. Retrieved November 22, 2010 from http://www.careerperformancestrategies.com

Powley, E. H, & Piderit, S.. (2008). Tending Wounds. *The Journal of Applied Behavioral Science, 44*(1), 134. Retrieved October 28, 2010, from ABI/INFORM Global. (Document ID: 1454964911).

Powley, E.H. & Taylor S.N., (2006). Leading with Values. InE.D. Hess & K. S. Cameron (Eds.), *Leading with Values: Positivity, Virtue, and High Performance* (pp. 194-212). New York, NY: Cambridge University Press.

Powley, E.H. (2009). Reclaiming resilience and safety: Resilience activation in the critical period of crisis. *Human Relations, 62*(9), 1289. Retrieved October 28, 2010, from ABI/INFORM Global. (Document ID: 1863940651).

Quinn, R. E. (2004). *Building the bridge as you walk on it: A guide for leading change*. San Francisco: Jossey-Bass.

Robert H. Pietrzak, (2010). Psychosocial buffers of traumatic stress, depressive symptoms, and psychosocial difficulties in veterans of Operations Enduring Freedom and Iraqi Freedom: The role of resilience, unit support, and postdeployment social support. *Journal of Affective Disorder (120),* January, 188-192. Retrieved October 08, 2010 from http://www.elsevier.com/locate/jad

Schouten, R., Callahan, M. V., & Bryant, S. (2004). *Community response to disaster: The role of the workplace*. Emmitsburg, MD: National Emergency Training Center.

Seung-Yoon Rhee, (n.d.) Group Resilience Process: Bouncing Back from a Negative Emotional State through Narrowing Interactions. *Korean Advanced Institute of Science and Technology.*

Sinclair, V.G., & Wallston, K.A. (2004). The development and psychometric evaluation of the Brief Resilient Coping Scale. *Assessment, 11*(1), 94-101.

Sutcliffe, K.M. & Vogus T.J., (2003). Organizing for Resilience. In K. S. Cameron, J.E. Duton & R.E. Quinn (Eds.), *Positive organizational scholarship: Foundations of a new discipline*. (pp. 94-110). San Francisco, CA: Berrett-Koehler.

Tarabay, J., (2010) For Army, Preventing Soldiers Suicides Starts on Day 1. Retrieved 07 December 2010 from http://www.npr.org/templates/story/story.php?storyId=130857445

Thomas, K. W., & Tymon, W. G. (1992). *Stress Resiliency Profile*. Tuxedo, NY: Xicom.

Tipton, J. (2007). George c. marshall: the essential strategic leader. (Master's thesis), U.S. Army War College. Retrieved June 5, 2010 from http://www.dtic.mil/cgi-bin/GetTRDoc?Location=U2&doc=GetTRDoc.pdf&AD=ADA469633

Tugade, M.M., & Fredrickson, B. L. (2004). Resilient individuals use positive emotions to bounce back from negative emotional experiences. *Journal of Personality and Social Psychology, 86,* (2), 320-333.

Vane, M., & Toguchi, R.. (2010, May). Achieving Excellence in Small-Unit Performance. *Military Review, 90*(3), 73-81. Retrieved October 20, 2010, from Military Module. (Document ID: 2066325661).

Vogus, T. J., & Sutcliffe, K. M. (2007). The safety organizing scale: Development and validation of a behavioral measure of safety culture in hospital nursing units. *Medical Care, 45* (1): 46-54.

Whetten, D. A., & Cameron, K. S. (2002). *Developing management skills*. Upper Saddle River New Jersey: Pearson Education International.

Wybo, J.-L. (January 01, 2004). Mastering risks of damage and risks of crisis: The role of organisational learning. *International Journal of Emergency Management,*1-2

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